

# CONTENTS

Volume 39, 1972

AHERN, P. R. AND RUDIN, WALTER. Factorizations of bounded holomorphic functions.....	767
AKEMANN, CHARLES A. AND WALTER, MARTIN E. Non-abelian Pontriagin duality.....	451
AVEZ, ANDRÉ. Riemannian manifolds with non-negative Ricci curvature	55
BEARD, J. T. B., JR. Matrix fields over prime fields.....	313
BEARD, J. T. B., JR. Matrix fields over finite extensions of prime fields..	475
BENNETT, G. AND KALTON, N. J. $FK$ -spaces containing $c_0$ .....	561
BENNETT, G. AND KALTON, N. J. Addendum to " $FK$ -spaces containing $c_0$ ".....	819
BERESIN, MAY AND LEVINE, EUGENE. Primitive numbers for a class of multiplicative functions.....	529
BERGUM, GERALD E. The distribution of $k$ -th power residues and non-residues in the integral domain $Z(\sqrt{-2})$ .....	19
BRAUER, ALFRED AND GENTRY, IVEY C. On stochastic matrices whose absolute smallest characteristic root is real.....	265
BRAWLEY, J. V. AND LEVINE, JACK. Equivalence classes of linear mappings with applications to algebraic cryptography, I.....	121
BRAWLEY, J. V. AND LEVINE, JACK. Equivalence classes of linear mappings with applications to algebraic cryptography, II.....	133
BRAWLEY, J. V. AND LEVINE, JACK. Equivalence classes of involutory mappings.....	211
BRECHNER, BEVERLY. Topological groups which are not full homeomorphism groups.....	97
BRENNER, J. L. Some simultaneous equations in matrices.....	801
BUCKHIESTER, PHILIP G. The number of $n \times n$ matrices of rank $r$ and trace $\alpha$ over a finite field.....	695
BURBEA, JACOB. On the Bergman metrics and their indicatrices.....	9
BURGESS, C. E. Extending self homeomorphisms of a wild sphere described by Gillman.....	725
CARLITZ, L. Some identities in combinatorial analysis.....	31
CARLITZ, L. Rectangular arrays of zeros and ones.....	153
CARLITZ, L. Enumeration of sequences by rises and falls: a refinement of the Simon Newcomb problem.....	267

CARLITZ, L. Some continued fraction formulas.....	793
CARLITZ, L. AND SCOVILLE, RICHARD. Tangent numbers and operators..	413
CARLITZ, L. AND SCOVILLE, RICHARD. Up-down sequences.....	583
CARLITZ, L. AND SUBBARAO, M. V. On a combinatorial identity of Winkist and its generalization.....	165
CHIVUKULA, R. RAO AND MAY, WILLIAM D. Lattice properties of $\mathcal{L}(E, F)$ .....	345
CLARK, DOUGLAS N. Some star-invariant subspaces in two variables....	539
COLTON, DAVID AND GILBERT, ROBERT P. Erratum. Nonlinear, analytic partial differential equations with generalized Goursat data.....	823
CORDES, CRAIG M. AND ROSELLE, D. P. Generalized frieze patterns....	637
COX, S. H., JR. AND RUSH, DAVID E. Endomorphisms of finite rank flat modules.....	323
CUTLER, WAYNE. Vitushkin's localization operator and holomorphic functions in polydiscs.....	737
DAVERMAN, ROBERT J. Pushing an $(n - 1)$ -sphere in $S^n$ almost into its complement.....	719
DE KONINCK, JEAN-MARIE. On a class of arithmetical functions.....	807
DOBBINS, J. GREGORY. On the kernel of a locally compact semigroup...	327
DRACHMAN, BYRON. A note on principal constructions.....	701
DURAN, J. PETER. Strongly regular matrices, almost-convergence, and Banach limits.....	497
FLETCHER, PETER AND LINDGREN, WILLIAM F. Orthocompactness and strong Čech completeness in Moore spaces.....	753
FRAZIER, ARLENE P. The dual space of $H^p$ of the polydisc for $0 < p < 1$	369
FULTON, JOHN D. Stochastic involutions over a finite field.....	391
GEHRING, F. W. Dilatations of quasiconformal boundary correspondences	89
GENTRY, IVEY C. AND BRAUER, ALFRED. On stochastic matrices whose absolute smallest characteristic root is real.....	265
GILBERT, ROBERT P. AND COLTON, DAVID. Erratum. Nonlinear, analytic partial differential equations with generalized Goursat data.....	823
GILMER, ROBERT. On commutative rings of finite rank.....	381
GRIFFITH, H. C. Locally geometrically unknotted one-manifolds.....	143

793	HADDAD, DAVID C. Asymptotic values of finitely valent functions.....	361
413	HAGOPIAN, CHARLES L. Erratum. A cut point theorem for plane continua	823
583	HALMOS, P. R. Products of shifts.....	779
165	HARTMAN, PHILIP. Convex functions and mean value inequalities.....	351
345	HILDEBRANT, JOHN A. Compact $p$ -adic semigroups.....	39
539	HIRSCHHORN, M. D. Partitions and Ramanujan's continued fraction..	789
823	HODEL, R. E. Spaces defined by sequences of open covers which guarantee that certain sequences have cluster points.....	253
637	HUDSON, RICHARD H. On the distribution of $k$ -th power nonresidues...	85
323	IFANTIS, EVANGELOS K. Perturbation of non-normal isometries.....	735
737	JACOBSON, DAVID AND WILLIAMS, KENNETH S. On the number of dis- tinguished representations of a group element.....	521
719	JUNG, FUANGLADA R. On exterior and interior points of quadrics over a finite field.....	183
807	JUNG, FUANGLADA R. Solutions of some systems of equations over a finite field with applications to geometry.....	189
327	KALTON, N. J. AND BENNETT, G. $FK$ -spaces containing $c_0$ .....	561
701	KALTON, N. J. AND BENNETT, G. Addendum to " $FK$ -spaces containing $c_0$ ".....	819
497	KANNAN, V. AND RAJAGOPALAN, M. Regularity and dispersion in count- able spaces.....	729
753	KWAK, NOSUP. Imbedding of compact metric spaces into cubes.....	65
369	LAKSER, H., PADMANABHAN, R. AND PLATT, C. R. Subdirect decom- position of Plonka sums.....	485
391	LAMBERT, A. L. AND TURNER, T. R. The double commutants of invertibly weighted shifts.....	385
89	LARMORE, LAWRENCE L. A universal countable first-countable Hausdorff space.....	179
265	LARSON, ROLAND E. AND VALENT, RICHARD. Basic intervals in the lattice of topologies.....	401
823	LAU, AUGUST Y. W. Concerning costability of compact semigroups.....	657
381	LAZAR, A. J. The unit ball in conjugate $L_1$ spaces.....	1
143		

LEVINE, EUGENE AND BERESIN, MAY. Primitive numbers for a class of multiplicative functions.....	529
LEVINE, JACK AND BRAWLEY, J. V. Equivalence classes of linear mappings with applications to algebraic cryptography, I.....	121
LEVINE, JACK AND BRAWLEY, J. V. Equivalence classes of linear mappings with applications to algebraic cryptography, II.....	133
LEVINE, JACK AND BRAWLEY, J. V. Equivalence classes of involutory mappings.....	211
LINDGREN, WILLIAM F. AND FLETCHER, PETER. Orthocompactness and strong Čech completeness in Moore spaces.....	753
MAY, WILLIAM D. AND CHIVUKULA, R. RAO. Lattice properties of $\mathcal{L}(E, F)$ .....	345
MCADAM, STEPHEN. Going down.....	633
MCCONNEL, R. Functions over finite fields satisfying coordinate $\psi$ -conditions.....	297
MCLEAN, T. BRUCE. Confluent images of tree-like curves are tree-like..	465
MCMAHON, D. AND WU, T. S. On weak mixing and local almost periodicity.....	333
MOORE, L. C., JR. AND REBER, JAMES C. Mackey topologies which are locally convex Riesz topologies.....	105
NICHOLS, J. C. AND SMITH, J. C. Embedding characterizations for expandable spaces.....	489
NG, SHU-BUN AND WARNER, SETH. Continuity of positive and multiplicative functionals.....	281
ONNEWEER, C. W. Absolute convergence of Fourier series on certain groups.....	599
PADMANABHAN, R., LAKSER, H. AND PLATT, C. R. Subdirect decomposition of Plonka sums.....	485
PALKA, BRUCE. Fréchet distance and the uniform convergence of quasiconformal mappings.....	289
PATTERSON, RICHARD R. AND STONG, ROBERT E. Orientability of bundles	619
PEDERSEN, GERT K. Applications of weak* semicontinuity in $C^*$ -algebra theory.....	431
PLATT, C. R., LAKSER, H. AND PADMANABHAN, R. Subdirect decomposition of Plonka sums.....	485

PRIKRY, KAREL. On a set-theoretic partition problem.....	77
RAJAGOPALAN, M. AND KANNAN, V. Regularity and dispersion in countable spaces.....	729
REBER, JAMES C. AND MOORE, L. C., JR. Mackey topologies which are locally convex Riesz topologies.....	105
RIEFFEL, MARC A. On the uniqueness of the Heisenberg commutation relations.....	745
ROSELLE, D. P. AND CORDES, CRAIG M. Generalized frieze patterns....	637
RUDIN, WALTER AND AHERN, P. R. Factorizations of bounded holomorphic functions.....	767
RUSH, DAVID E. AND COX, S. H., JR. Endomorphisms of finite rank flat modules.....	323
SCHNEIDER, VICTOR. Degree of symmetry of Stiefel manifolds.....	285
SCHURLE, ARLO W. Decompositions of $E^3$ into shrinkable ends.....	45
SCOVILLE, RICHARD AND CARLITZ, L. Tangent numbers and operators...	413
SCOVILLE, RICHARD AND CARLITZ, L. Up-down sequences.....	583
SIDNEY, S. J. On the Šilov and Bishop decompositions of a uniform algebra.....	551
SINGHAL, J. P. A generating function and a binomial identity.....	25
SINGHAL, J. P. AND SRIVASTAVA, H. M. Some extensions of the Mehler formula, II.....	173
SMITH, J. C. AND NICHOLS, J. C. Embedding characterizations for expandable spaces.....	489
SMITH, LARRY. Operations in mod $p$ connective $K$ theory and the $J$ homomorphism.....	623
SRIVASTAVA, H. M. AND SINGHAL, J. P. Some extensions of the Mehler formula, II.....	173
STONG, ROBERT E. AND PATTERSON, RICHARD R. Orientability of bundles.....	619
SUBBARAO, M. V. AND CARLITZ, L. On a combinatorial identity of Winquist and its generalization.....	165
TAYLOR, S. J. Exact asymptotic estimates of Brownian path variation..	219
THOMSON, B. S. A theory of integration.....	503

THOMSON, B. S. On McShane's vector-valued integral.....	511
TURNER, T. R. AND LAMBERT, A. L. The double commutants of invertibly weighted shifts.....	385
VALENT, RICHARD AND LARSON, ROLAND E. Basic intervals in the lattice of topologies.....	401
VAUGHAN, J. E. Product spaces with compactness-like properties.....	611
VERMA, ARUN. On $\sigma$ -type polynomials generated by $A(t)\psi(xH(t))$ .....	149
WAGNER, CARL G. Interpolation series in local fields of prime characteristic.....	203
WALTER, MARTIN E. AND AKEMANN, CHARLES A. Non-abelian Pontragin duality.....	451
WANG, S. P. Compactness properties of topological groups, II.....	243
WARNER, SETH AND NG, SHU-BUN. Continuity of positive and multiplicative functionals.....	281
WARREN, H. E. Sets in $C(X)$ analytically equivalent to the open ball....	711
WELLS, ROBERT. Concordance of diffeomorphisms and the pasting construction.....	665
WILLETT, MICHAEL. The minimum polynomial for a given solution of a linear recursion.....	101
WILLIAMS, KENNETH S. AND JACOBSON, DAVID. On the number of distinguished representations of a group element.....	521
WOODS, A. C. On a conjecture of Mahler in the geometry of numbers....	649
WU, T. S. AND McMAHON, D. On weak mixing and local almost periodicity.....	333

11

85

101

311

149

203

451

243

281

711

665

101

521

649

333